REMARKS

No claims are being amended. Claims 40 and 41 are being added. Claims 36, 37 and 38 are being cancelled without prejudice to prosecution in a later application and to save fees. Upon entry of the amendment claims 18-35 and 39-41 will be pending in the application. The amendment adds no new matter.

New claim 40 is supported by the specification and claims 18 and 19.

New claim 41 is supported by the specification and claim 36.

1) U.S. Patent No. 6,140,394 to Kamiyama et al.

Kamiyama is directed to a method of producing polymer particles by suspension polymerization. Kamiyama repeatedly limits the disclosure to only suspension polymerization. See, for example: Title; Abstract; Column 1, lines 13-16; Column 2, lines 25-29; column 2, lines 36-49; Column 4, lines 57-60; Column 5, lines 43-45; Examples 1 and 2 and Claim 1.

Kamiyama distinguishes and teaches away from emulsion polymerization, stating that emulsion polymerization as a method has defects (column 1, lines 31-42). Kamiyama further distinguishes and teaches away from emulsion polymerization stating that the claimed suspension polymerization method solves the problems encountered with emulsion polymerization (column 2, lines 33-36).

Kamiyama discloses that the polymer particles therein can be within the range of 5-50 micrometers (column 1, line 15) or 2-30 micrometers (column 6, lines 11-16).

The only use of the word "filler" in Kamiyama (column 1, line 12 and line 24) is to describe the formed polymer product as "functional fillers" in a downstream product. Kamiyama does not use the word "filler" to refer to a filler particle in the composition. Kamiyama discloses the use of suspension stabilizers at column 6, lines 27-50. This teaching is predominately directed to water soluble polymer suspension stabilizers. Kamiyama briefly discloses inorganic powder suspension stabilizers at column 6, lines 43-45 stating: "Inorganic powders such as calcium phosphate powder and fine silica powder are also often used as suspension stabilizers." The suspension stabilizers do not appear to be dispersed as calcium phosphate is dissolved (see

Example 2) and silica "covers the surface of the polymer droplet (column 6, lines 45-46). There is no disclosure of particular inorganic particle sizes. There is no disclosure of ratio of inorganic particle size to polymer particle size. There is no disclosure of any reason to use a particular ratio of inorganic particle size to polymer particle size.

2) The rejection of claims 18-24 and 35 under 35 U.S.C. §103(a).

Claims 18-39 are rejected under 35 U.S.C. §103(a) as having each and every feature and interrelationship anticipated by U.S. Patent No. 6,140,394 to Kamiyama et al. in view of the product literature of Hielscher-Ultrasound Technology, (http://www.hielscher.com/ultrasonics/size_reduction_silica_01.htm) ("Hielscher Technology").

The Office admits that Kamiyama does not disclose filler particle size or ratio of filler particle size to synthetic organic polymer particle size. The Office goes on to assert:

> However, a product literature of Hielscher-Ultrasound Technology, disclose standard silica that can have particle sizes range from 2 microns to 600 microns, with median particle size of about 250 microns. Since the product literature (abstract) clearly teach that the disclosed silica can be dispersed to form a dispersion with improved dispersion properties, it would have been obvious to one skilled in the art to incorporate the particle size teachings of the product literature into Kamiyama et al. In view of the particle sizes as taught in the product literature and the particle size as taught in Kamiyama et al. (Fig. 3-6), the examiner has a reasonable basis that the claimed ratios have been met by Kamiyama et al. in view of the product literature of Hielscher.

a) Errors in the rejection.

i) The Action on page 3 asserts: "Although Kamiyama et al. are silent on the exact dimension of the inorganic powder disclosed, however, it is well recognized that the disclosed 'powder' of Kamiyama et al. is referring to a size range of at least 200 microns." There is no support for this statement in Kamiyama. **Applicants traverse this statement.**

ii) The Action on page 3 asserts: "Further, according to Kamiyama et al. (Fig. 3-6), the polymer particles of Kamiyama et al. ranges from 1 to about 20 microns, 0.5 to 50 microns (col. 6, line 1-14), or higher (col. 9, line 28-36; col. 10, line 42 to col. 12, line 66)." **Applicants traverse this statement.**

- column 6, lines 1-14 discloses polymer particles may be in the range of 2-3 microns to 30 microns NOT 0.5 to 50 microns as asserted.
- column 9, lines 28-36 does not disclose any definite polymer particle size.
- column 10, line 42 to column 11, line 21 does not disclose any definite particle size. The Examples from column 11, line 22 to column 12, line 66 disclose preparation of polymer particles having median sizes of 5.2 microns and 4.8 microns.

There is no support in Kamiyama for polymer particles outside the range of 2-3 microns to 50 microns in size.

b) The proposed combination does not teach or suggest Applicants' claimed composition comprising both filler particles and water soluble organic polymer.

A prior art reference or combined references must teach or suggest all of the limitations of a claim to be prior art under §103. In re Wilson, 165 USPQ 494, 496 (C.C.P.A. 1970). When even one claim limitation is not found in the combination of prior art, a rejection under 35 U.S.C. §103 is improper. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974).

Pending claim 18 recites:

> A filler-containing polymer dispersion, comprising
> water,
> particles of at least one filler selected from the group consisting of organic fillers, inorganic fillers and mixtures thereof,
> at least one water soluble organic polymer with a molecular weight of more than 600 and an HLB value of at least 15, and
> particles of at least one synthetic organic polymer, polymerized in the presence of at least one type of the filler particles,
> wherein the dispersion has a ratio of filler particle size to synthetic organic polymer particle size of 1.1:1 to 20:1.

Thus, claim 18 recites BOTH particles of at least one filler AND particles of at least one water soluble organic polymer.

The rejection does not explicitly indicate which components of Kamiyama are asserted against which features of claim 18. As best understood, Applicants' water soluble organic polymer is asserted to be the polyvinyl alcohol disclosed at Kamiyama column 6, lines 39-43. Applicants' particles of at least one filler is asserted to be the calcium phosphate or silica powder disclosed at Kamiyama column 6, lines 43-45.

Both polyvinyl alcohol and calcium phosphate or silica powder are disclosed by Kamiyama (column 6, lines 27-50) to be "Suspension Stabilizer". There is no disclosure that BOTH polyvinyl alcohol and calcium phosphate or silica powder are used at the same time. There are no Examples in Kamiyama illustrating use of silica powder. Thus, this rejection "double books" one material from Kamiyama (the suspension stabilizer) to be two of Applicants' recited claim features. Kamiyama does not teach or suggest use of both polyvinyl alcohol and silica powder as asserted in the rejection. Claims 18-24, 34 and 37-39 are patentable for at least this reason.

c) The proposed combination does not explicitly disclose "filler".

A suspension stabilizer is a material such as a protective colloid that inhibits agglomeration of particles. See attached page 987 from The Condensed Chemical Dictionary. A filler is added in large quantities to displace a more expensive material in a composition or change properties of the composition. See attached page from http://en.wikipedia.org/wiki/Filler_(materials).

Kamiyama fails to disclose "filler". The only reference to "filler" in Kamiyama (column 1, line 12 and line 24) is to uses for the formed polymer particles. The text of Kamiyama cited in the rejection is limited to suspension stabilizers. As taught by Kamiyama at column 6, lines 43-47: "Inorganic powders such as calcium phosphate powder and a fine silica powder are also often used as suspension stabilizers. These suspension stabilizers cover the surfaces of droplets so that they will not coalesce or agglomerate during polymerization." Kamiyama's use of silica as a suspension stabilizer is in agreement with the use of that term in the art and contrary to use as a filler as understood in the art.

Hielscher Technology discloses use of silica as a multi-functional ceramic material that can be used for different purposes in paint, plastics, adhesives, insulation and concrete. There is no teaching in Hielscher Technology that silica is useful as filler, or might be useful as filler, in the Kamiyama composition.

The Office asserts: "Although Kamiyama et al. fail to label the inorganic powder as filler, it is still filler because the inorganic powder remains in the final prepared dispersion composition." The Office assertion completely ignores 1) the explicit teaching of Kamiyama that the silica covers the surface of the polymer droplet to act as a suspension stabilizer; 2) the definition of filler as used in the chemical arts; and 3) the undesirable thickening effect that would occur in the Kamiyama composition if silica was used as filler.[1] Kamiyama knows what filler is (see the disclosure therein at column 1, lines 12 and 24) and clearly teaches that silica in that composition is NOT filler. Claims 18-24, 34 and 37-39 are patentable for at least this reason.

d) Even if the Kamiyama suspension stabilizer is wrongly considered to be a filler the proposed combination does not necessarily teach or suggest Applicants' claimed ratio of inorganic particle size to polymer size.

Arguendo, if the inorganic suspension stabilizer of Kamiyama can be considered filler (which Applicants dispute), then there is no teaching or suggestion in the proposed combination that would necessarily lead to Applicants' claimed ratio of inorganic particle size to polymer particle size.

i) The proposed combination does not explicitly disclose a ratio of inorganic particle size to polymer size.

The Office admits that Kamiyama fails to explicitly disclose suspension stabilizer particle size and any ratio of inorganic particle size to polymer particle size. A ratio of inorganic particle size to polymer particle size may exist in the Kamiyama reference. However, it is simply not possible to discern that ratio from the Kamiyama reference because *it never provides any size for the inorganic particles!* The fact that the inorganic particle size *can* be measured does not change the fact that *it never was measured.* Hielscher Technology does not disclose any ratio of inorganic particle size to polymer particle size.

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[1] Kamiyama teaches at column 6, lines 17-23 that increasing composition viscosity will undesirably lead to particle size growth or gelling. Suspension stabilizers are used to prevent these undesirable effects. Silica used as a filler in

ii) The proposed combination does not inherently disclose a ratio of inorganic particle size to polymer size.

The express, implicit, and inherent disclosures of a prior art reference may be relied upon in the rejection of claims under 35 U.S.C. §102. See MPEP §2112. However, "[t]he doctrine of inherency is available only when the prior inherent event can be established as a certainty. That an event may result from a given set of circumstances is not sufficient to establish anticipation. Probabilities are not sufficient . . . A prior inherent event cannot be established based upon speculation . . ." Ethyl Molded Products Co. v. Betts Package Inc., 9 USPQ2d 1001, 1032-1033 (E.D. Ky. 1988). The Court of Appeals for the Federal Circuit has reinforced this position stating: "[t]he fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic." In re Rijckaert, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993). To rely on the theory of inherency in rejecting a claim under 35 U.S.C. §§102 or 103, ". . . the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied art." Ex parte Levy, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original).

Further, the chemical arts are known to be unpredictable so that a person of ordinary skill is cautious about extrapolating from teachings within those arts. See, for example, In re Marzocchi, 169 USPQ 367, 368-370 (CCPA 1971); In re Soni, 54 F.3d 746, 750 (Fed. Cir. 1995); and Eisai Co. v. Dr. Reddy's Labs., Ltd, 533 F.3d 1353, 1359 (Fed. Cir. 2008). This caution in extrapolating from chemical teachings is especially true in the present case as the Kamiyama reference uses a different polymerization process; does not disclose use of filler in the composition therein; does

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the manner proposed in the rejection would undesirably thicken the Kamiyama composition. Discussed further not disclose any particular inorganic particle size; does not disclose any necessary or useful ratio of inorganic particle size to polymer particle size; does not disclose any reason to use a particular ratio of inorganic particle size to polymer particle size; and uses a different dispersion process than Hielscher Technology.

(1) The Hielscher Technology graph referred to on page 4 of the Office Action is NOT relevant to suspension stabilizers or to shear mixing as used in Kamiyama.

Hielscher Technology explicitly teaches on page 1, with bracketed text added, that "Ultrasonic processing has been proven to be more effective in dispersing of silica than other high-shear mixing methods. The picture below [graph referred to on page 4 of the Office Action] shows a typical result of ultrasonic dispersing of fumed silica in water."

- The Hielscher Technology graph referred to in the Office Action is for a dispersion of an unknown amount of fumed silica in water.
- The Hielscher Technology graph referred to in the Office Action is the result of an ultrasonic dispersion method and NOT for a high shear mixing method.
- The Hielscher Technology graph referred to in the Office Action is NOT relevant to high shear mixing methods such as used in Kamiyama.
- The Hielscher Technology graph referred to in the Office Action is NOT relevant to suspension stabilizers such as used in Kamiyama.

(2) The proposed combination provides a huge range of theoretically possible ratios for filler particle size to polymer particle size.

The Examiner previously asserted:

> Applicants must recognize that the silica powder (col. 6, line 43-45) and polymer particle (col. 1, line 15-16; col. 6, line 11-12, 15) as taught in Kamiyama et al. clearly have sizes that are measurable in micron size ranges, it would not be difficult to one of ordinary skill in art that [sic] there is a ratio exist between the two filler materials or other ingredients. As affirmed in the product literature of Hielscher - Ultrasound Technology,

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below.

> standard silica can have particle sizes range from 2 microns to 600 microns, . . .

The Examiner presently asserts:

> However, a product literature of Hielscher-Ultrasound Technology, disclose standard silica that can have particle sizes range from 2 microns to 600 microns . . .

Kamiyama discloses polymer particle sizes within the range of 5 to 50 micrometers (column 1, line 15) or 2 to 30 micrometers (column 6, lines 11-15). Hielscher Technology discloses that fumed silica particles dispersed in water can have a particle size of <0.2 micrometers to >600 micrometers. The previously submitted CAB-O-SIL M-5P literature[2] discloses that some forms of silica can have an average particle length of 0.2-0.3 microns. Using these particle sizes it is theoretically possible to have a ratio of inorganic particle size to polymer particle size ranging from:

inorganic particle size	**polymer particle size**	**ratio inorganic particle size : polymer particle size**
0.2 micrometers	2 micrometers	0.2:2 or 0.1:1
600 micrometers	2 micrometers	600:2 or 300:1
0.2 micrometers	50 micrometers	0.2:50 or 0.004:1
600 micrometers	50 micrometers	600:50 or 12:1

Thus, the cited art provides a theoretically possible range of ratios for inorganic particle size to polymer particle size from 0.004:1 to 300:1; spanning almost five (5) orders of magnitude!

(3) Kamiyama does not disclose any reason to narrow the huge range of ratios for filler particle size to polymer particle size.

- Kamiyama does NOT use filler particles.
- Kamiyama does NOT describe any particular size for inorganic particles.
- Kamiyama does NOT disclose any reason to use a particular inorganic particle size.

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[2] Submitted in a Form 1449 on October 5, 2006.

- Kamiyama does NOT disclose any particular ratio of inorganic particle size to polymer particle size.
- Kamiyama does NOT disclose any reason to use a particular range of ratios of inorganic particle size to polymer particle size.

(4) Hielscher Technology does not disclose any reason to narrow the huge range of ratios for filler particle size to polymer particle size.

There is no teaching in Hielscher Technology of suspension stabilizers. There is no teaching in Hielscher Technology that silica is useful as filler, or might be useful as filler, in the Kamiyama composition. There is no teaching in Hielscher Technology of any ratio of inorganic particle size to polymer particle size within any composition. There is no teaching in Hielscher Technology of silica particle size resulting from high shear mixing such as taught in Kamiyama.

(5) Applicant claims only a very narrow range of ratios for filler particle size to polymer particle size.

Pending claim 18 recites in one pertinent part: ". . . wherein the dispersion has a ratio of filler particle size to synthetic organic polymer particle size of 1.1:1 to 20:1."

(6) There is no teaching or suggestion in the proposed combination that the ratio for inorganic particle size to polymer particle size MUST fall within Applicant's claimed range.

There is no teaching or suggestion in either cited reference to use any particular ratio for inorganic particle size to polymer particle size. Given the huge, theoretically possible range of ratios for inorganic particle size to polymer particle size (0.004:1 to 300:1) why **MUST** the Kamiyama material have a ratio of inorganic particle size to polymer particle size of only 1.1:1 to 20:1 as claimed by Applicant? In fact, given the huge, theoretically possible range of ratios for inorganic particle size to polymer particle size (0.004:1 to 300:1) it appears more probable that the ratios for inorganic particle size to polymer particle size in the proposed combination fall outside of Applicant's very narrow ratio range than within Applicant's very narrow ratio range.

Even if the inorganic suspension stabilizer of Kamiyama can be considered filler (which Applicants dispute), there is no explicit or inherent teaching or suggestion in the proposed combination that would necessarily lead to Applicants' claimed ratio of inorganic particle size to polymer particle size. Claims 18-24, 34 and 37-39 are patentable for at least this reason.

e) The huge, theoretically possible genus of inorganic particle size to polymer particle size ratios in the proposed combination does not make Applicant's narrowly claimed range of ratios obvious.

If a reference's disclosed range is so broad as to encompass a very large number of possible distinct compositions, this might present a situation analogous to the obviousness of a species when the prior art broadly discloses a genus. MPEP§2144.05(I). It is well established that the disclosure of a genus in the prior art is not necessarily a disclosure of every species that is a member of that genus. In re Baird, 16 F.3d 380, 382 (Fed. Cir. 1994). There may be many species encompassed within a genus that are not disclosed by a mere disclosure of the genus. Atofina v. Great Lakes Chem. Corp., 441 F.3d 991, 999 (Fed. Cir. 2006). A genus does not automatically make obvious every species therein. MPEP §2144.08.

Kamiyama and Hielscher Technology both lack any teaching or suggestion leading to any ratio of inorganic particle size to polymer particle size. Arguendo, if the inorganic suspension stabilizer of Kamiyama can be considered filler (which Applicants dispute); and if Hielscher Technology can disclose "standard silica" sizes for high shear mixing (which applicants' also dispute); then the huge genus of theoretically possible ratios for inorganic particle size to polymer particle size (0.004:1 to 300:1) in the proposed combination does not anticipate or make obvious Applicants' narrow species of ratio of filler particle size to polymer particle size of 1.1:1 to 20:1. Claims 18-24, 34 and 37-39 are patentable for at least this reason.

f) Kamiyama teaches against use of filler as proposed in the combination.

A reference that teaches away from a claimed invention does not provide the suggestion or motivation needed to anticipate or make obvious a claimed invention. In fact, the courts have stated that a reference that teaches away from a claimed invention is an indication of the nonobviousness of that invention. "A reference, however, must have been considered for all it taught, disclosures that diverged and taught away from the invention at hand as well as disclosures that pointed towards and taught the invention at hand." Ashland Oil, Inc. v. Delta resins & Refractories, Inc., 227 USPQ 657, 666 (Fed. Cir. 1985). "One important indicium of nonobviousness is 'teaching away' from the claimed invention by the prior art." In re Braat, 16 USPQ2d 1813, 1814 (Fed. Cir. 1990). The prior art reference must be considered in its entirety, including portions that would lead away from the claimed invention. See MPEP 2141.02. A *prima facie* case of obviousness of ranges may be rebutted by showing that the art, in any material respect, teaches away from the claimed invention. MPEP §2144.05(III). A "reference will teach away if it suggests that the line of development flowing from the reference's disclosure is unlikely to be productive of the result sought by the Applicant." Winner v. Wang, 202 F.3d 1340 (Fed Cir. 2000).

A filler is added in large quantities to displace a more expensive material in a composition or change properties of the composition. Silica (the "filler" proposed in the Office rejection) is a thickening additive and when used as filler will increase the viscosity of some compositions. See attached page from http://westmarine.com/webapp/wcs/stores/servlet/producte/10001/-1/10001/29011?.

Kamiyama teaches at column 6, lines 17-23 that increasing composition viscosity will undesirably lead to particle size growth or gelling. Suspension stabilizers are used to prevent these undesirable effects. Silica used in large amounts as a filler in the manner proposed in the rejection would undesirably thicken the Kamiyama composition.

The proposed combination adds filler to the Kamiyama composition despite the explicit teaching of Kamiyama that the silica is used, if at all, as a suspension stabilizer and not a filler (under the definition of filler as used in the chemical arts). The proposed combination does not meet the requirements for a *prima facie* obviousness rejection. Claims 18-24, 34 and 37-39 are patentable for at least this reason.

g) The proposed modification renders Kamiyama unsatisfactory.

If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. MPEP 2143.01, Rev. 2 May 2004, pp. 2100-131.

A filler is added in large quantities to displace a more expensive material in a composition or change properties of the composition. Silica (the "filler" proposed in the Office rejection) is a thickening additive and when used as filler will increase the viscosity of some compositions. See attached page from http://westmarine.com/webapp/wcs/stores/servlet/producte/10001/-1/10001/29011? ("Westmarine")

Kamiyama teaches at column 6, lines 17-23 that increasing composition viscosity will undesirably lead to particle size growth or gelling. Suspension stabilizers are used to prevent these undesirable effects. Silica used in large amounts as a filler in the manner proposed in the rejection would undesirably thicken the Kamiyama composition.

The proposed combination adds filler to the Kamiyama composition despite the explicit teaching of Kamiyama that the silica is used, if at all, as a suspension stabilizer; despite the contrary definition of filler as used in the chemical arts; and despite the undesirable thickening effect that would occur in the Kamiyama composition if silica was used as a filler. The proposed addition of filler would render the Kamiyama composition viscous, gelled and unsatisfactory. The proposed combination does not meet the requirements for a *prima facie* obviousness rejection. Claims 18-24, 34 and 37-39 are patentable for at least this reason.

3) Claim 19 is patentable for additional reasons.

Claim 19 recites: "The filler-containing polymer dispersion as claimed in claim 18, wherein the synthetic organic polymer particles have a diameter (d50) of 0.03

to 0.5 µm." As discussed above Kamiyama teaches polymer particles having a size of 2 to 50 micrometers. There is no teaching or suggestion in either Kamiyama or Hielscher Technology of synthetic organic polymer particles have a diameter (d50) of 0.03 to 0.5 µm. Claim 19 is patentable for at least this reason.

4) Claims 24 and 38 are patentable for additional reasons.

Claim 24 recites in one pertinent part: "The filler-containing polymer dispersion as claimed in claim 18 comprising: . . . 5 to 55% by weight of filler particles . . ." The Office asserts that the silica powder suspension stabilizer of Kamiyama is Applicants' recited filler. The Office does not indicate where the art of record discloses the use of 5 to 55% by weight of silica powder. The Office does not indicate why use of 5 to 55% by weight of silica powder in the composition of Kamiyama would not lead to undesirable viscosity increases in that composition as taught by Kamiyama. Claim 24 is patentable for at least this reason. Claim 38 recites similar features and is patentable for similar reasons.

5) The rejection of claims 25-33 and 35 under 35 U.S.C. §103(a).

Claims 25-33 and 35 are rejected under 35 U.S.C. §103(a) as having each and every feature and interrelationship anticipated by U.S. Patent No. 6,140,394 to Kamiyama et al. in view of the product literature of Hielscher-Ultrasound Technology, (http://www.hielscher.com/ultrasonics/size_reduction_silica_01.htm) ("Hielscher Technology").

Pending claim 25 recites:

> The process for the production of a filler-containing polymer dispersion, which comprises: emulsion polymerizing at least one radical-polymerizable monomer in an aqueous phase using a polymerization initiator, the aqueous phase containing filler particles of at least one dispersed filler with a particle size (d50) of 0.01 to 0.5 µm and at least one water-soluble organic polymer with a molecular weight of more than 600 and an HLB value of more than 15 whereby a dispersion comprising filler particles and polymer particles is formed.

The Office admits that Kamiyama does not disclose filler particle size or ratio of filler particle size to synthetic organic polymer particle size. The Office goes on to assert that Hielscher Technology:

> . . . disclose standard silica that can have particle sizes range from 2 microns to 600 microns, with median particle size of about 250 microns. Since the product literature (abstract) clearly teach that the disclosed silica can be dispersed to form a dispersion with improved dispersion properties, it would have been obvious to one of ordinary skill in the art to incorporate the particle size teachings of the product literature into Kamiyama et al.

a) The proposed combination does not teach or suggest Applicants' claimed emulsion polymerization.

Hielscher Technology is devoid of any teaching or suggestion of any polymerization mechanism. As discussed above, Kamiyama discloses only suspension polymerization methods. In fact, Kamiyama distinguishes away from the emulsion polymerization recited in Applicants' claims, teaching that the disclosed suspension polymerization method solves alleged problems resulting from use of emulsion polymerization. The April 5, 2006 Office Action acknowledges that Kamiyama discloses only suspension polymerization. The Office does not point to any disclosure in Kamiyama supporting the emulsion polymerization feature. There is no support or enabling disclosure[3] for emulsion polymerization in either Hielscher Technology or Kamiyama. Claims 25-33 and 35 are patentable for at least this reason.

b) The proposed combination does not teach or suggest Applicants' claimed filler.

As discussed above Kamiyama fails to disclose "filler". The text of Kamiyama cited in the rejection is limited to suspension stabilizers. There is no teaching in Hielscher Technology that silica is useful as filler, or might be useful as filler, in the Kamiyama composition. The proposed combination does not teach or suggest Applicants' claim 25 including filler. Claims 25-33 and 35 are patentable for at least this reason.

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[3] A non-enabling reference may qualify as prior art for the purposes of determining obviousness under 35 U.S.C. §103, but only for what is disclosed in that reference. Symbol Technologies Inc. v. Opticon Inc., 935 F.2d 1569, 1578; 19 USPQ2d 1241, 1247 (Fed. Cir. 1991).

c) **The proposed combination does not teach or suggest Applicants' claimed filler with a particle size (d50) of 0.01 to 0.5 micrometers.**

The Office admits that Kamiyama does not disclose any filler particle size. The Office admits that Hielscher Technology discloses: "standard silica that can have particle sizes range from 2 microns to 600 microns, with median particle size of about 250 microns." **Thus, the Office admits that the record does not teach or suggest any composition comprising filler with a particle size (d50) of 0.01 to 0.5 micrometers.** Claims 25-33 and 35 are patentable for at least this reason.

d) **The proposed combination does not teach or suggest Applicants' claimed dispersion comprising filler particles and polymer particles.**

The Office asserts that the silica in Kamiyama is Applicants' claimed filler. Kamiyama uses silica, if at all, as a suspension stabilizer to cover the surface of the polymeric droplets so that the droplets will not coalesce. In sum, if silica is used in Kamiyama it is tied to the surface of the polymer droplet and not present as a discrete particle. There is no teaching in Hielscher Technology that silica is useful as filler, or might be useful as filler, in the Kamiyama composition. The proposed combination does not teach or suggest Applicants' claim 25 including a dispersion comprising filler particles and polymer particles. Claims 25-33 and 35 are patentable for at least this reason.

e) **Kamiyama teaches against use of filler as proposed in the combination.**

As discussed above in point 2, the proposed combination adds filler to the Kamiyama composition despite the explicit teaching of Kamiyama that the silica is used, if at all, as a suspension stabilizer and not a filler (under the definition of filler as used in the chemical arts). The proposed combination does not meet the requirements for a *prima facie* obviousness rejection. Claims 25-33 and 35 are patentable for at least this reason.

f) The proposed modification renders Kamiyama unsatisfactory.

As discussed above in point 2, the proposed combination adds filler to the Kamiyama composition despite the explicit teaching of Kamiyama that the silica is used, if at all, as a suspension stabilizer; despite the contrary definition of filler as used in the chemical arts; and despite the undesirable thickening effect that would occur in the Kamiyama composition if silica was used as a filler. The proposed addition of filler would render the Kamiyama composition viscous, gelled and unsatisfactory. The proposed combination does not meet the requirements for a *prima facie* obviousness rejection. Claims 25-33 and 35 are patentable for at least this reason.

In summary, Applicants have addressed the pending rejections. It is believed that claims are patentable over the art of record and prompt favorable action thereon is respectfully solicited. The Examiner is invited to telephone Applicants' attorney at 860 571 2501 if it is deemed that a telephone conversation will hasten prosecution of this application.

Respectfully submitted,

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Date: June 30, 2009

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